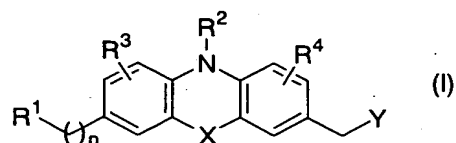
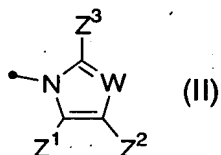


Abstract

The present invention provides an agent for prevention and/or treatment of itching comprising a substance capable of suppressing the function involved in signal transduction of GPR4 as an active ingredient. It also provides a nitrogen-containing tricyclic compound represented by the formula (I) or a quaternary ammonium salt thereof, or a pharmaceutically acceptable salt thereof;



[wherein R^1 represents substituted or unsubstituted lower alkyl, etc.; R^2 represents hydrogen, substituted or unsubstituted lower alkyl, etc.; R^3 and R^4 are the same or different and each represents hydrogen, lower alkyl, etc.; n represents 0 or 1; X represents $-(CH_2)_2-$, etc.; and Y represents the formula (II);



(wherein W represents CH or a nitrogen atom; Z^1 and Z^2 are the same or different and each represents hydrogen, substituted or unsubstituted lower alkyl, etc.; and Z^3 represents hydrogen, substituted or unsubstituted lower alkyl, etc.)]